



Water Storage Manager
Water Quality Annual
Report 2021/22

*Safe Drinking Water
Act 2003*

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2.1	FINAL	27 October 2021	Kristen McNamara <i>Environmental Advisor</i>	Cameron Fitzgerald <i>Managing Director Southern Rural Water</i>

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Foreword

Southern Rural Water (SRW), as a water storage manager, is required under Section 26 of the *Safe Drinking Water Act 2003* (the *Act*) to provide the Secretary to the Department of Health (DH) with a report each financial year. This report covers SRW's commitment to the safe drinking water framework, any issues in the current year relating to the quality of untreated water which is managed by SRW and details that are required by the *Safe Drinking Water Regulations 2015* (the *Regulations*).

This 2021/22 annual report covers the period from 1 July 2021 to 30 June 2022 and was developed in accordance with the *Safe Drinking Water Regulation Guidance Note* released by the DH in June 2017, and with Regulations 16 and 17 of the *Regulations*.

Southern Rural Water (SRW), as a water storage manager, is committed to working in partnership with DH and relevant agencies to ensure that its decision-making and actions effectively support the supply of safe drinking water by water suppliers.

Introduction

Our business

SRW's Headworks business is responsible for the harvest, storage, and delivery of water to customers in accordance with the provisions of the Bulk Entitlement Orders.

We are responsible for harvesting and storing water in seven major storages. These include:

- Lake Glenmaggie, Lake Narracan and Blue Rock Lake, located in Gippsland; and,
- Melton, Merrimu, Pykes Creek and Rosslynne Reservoirs located to the west of Melbourne.

The Headworks business also manages the recreational facilities at most of these storages. There is no primary or secondary contact water-based recreation permitted at Merrimu and Rosslynne Reservoirs.

SRW stores untreated water which is used for:

- Irrigation and rural purposes;
- Urban water supply to Gippsland Water and Greater Western Water; and,
- Industry, including power generation in the Latrobe Valley.

Under the *Act*, SRW is a water storage manager that supplies water to a water supplier. This report therefore focuses on SRW's role in providing untreated water to Gippsland Water and Greater Western Water.

Lake Glenmaggie and Blue Rock Lake supply raw water to Gippsland Water while Merrimu, Pykes Creek and Rosslynne Reservoirs supply raw water to Greater Western Water. For the purposes of this report, 'raw drinking water' means untreated water harvested in SRW's storages and released to urban water suppliers.

The Board of SRW approved in May 2005 a raw water policy that outlines SRW's commitment to water quality management in its reservoirs. The policy was reviewed and updated in February 2016 and 2020.

The policy states that we shall:

- Maintain and review safe drinking water Risk Management Plans for each of SRW's storages that provide raw water to water suppliers, and implement actions to mitigate the risks identified within those plans
- Engage regularly with stakeholders from the catchment and water suppliers to promote a coordinated approach to managing risks to drinking water
- Report any identified or suspected issues with raw water quality to stakeholders in a timely manner
- Maintain effective contingency and incident response procedures
- Provide training and support for all SRW staff involved in the supply and management of raw water, including identification of water quality incidents, notification protocols and sampling regimes and requirements.

SRW is committed to working in partnership with stakeholders and relevant agencies to ensure that its decision-making and actions effectively support the supply of safe drinking water by water suppliers, as defined in the *Safe Drinking Water Act 2003*.

Our water supply systems

SRW operates four water supply systems that involve the supply of raw water to water suppliers. Detail of these four systems is included in Table 1.

Table 1: SRW water supply systems

System	Catchments	Storage	Supply points/ Offtakes	Treat- ment	Urban Water Supplier	Catch- ment Manage- ment Authority
Werribee system	Lake Merrimu (Lerderderg River)	Merrimu Reservoir	Offtake @ tower (valve house)	No	Greater Western Water	Melbourne Water
	Lake Merrimu (Goodmans Creek)	Pykes Creek Reservoir	Offtake @ tower (valve house)	No		
Rosslynne system	Rosslynne Reservoir (Jacksons Creek)	Rosslynne Reservoir	Offtake @ tower (valve house)	No	Greater Western Water	
Thomson / Macalister system	Lake Glenmaggie	Lake Glenmaggie	Offtake to: Maffra, Stratford & Boisdale @ 15 km downstream of storage on Macalister River	No	Gippsland Water	West Gippsland CMA
Blue Rock system	Tanjil River	Blue Rock Lake	Offtake to: Willow Grove @ tower Moondarra Reservoir @ tower Moe @ 15km downstream on Tanjil River	No	Gippsland Water	

Each supply system, from catchment to the offtake to water supplier, is detailed in its related risk management plan. Maps of each SRW specific system have been reproduced in the appendices of this annual report. All systems have associated proclaimed catchments as listed in Table 1 and detailed in the appendices.

During the 2021/22 period, Gippsland Water undertook works to pipe the water supply for Coongulla from the Heyfield water treatment plant. Drinking water for residents of Coongulla and Glenmaggie were previously sourced directly from Lake Glenmaggie. Gippsland Water implemented plans to install a pipeline from Heyfield (sourced from the Thomson River) as a more reliable water supply. As such, the Coongulla Treatment Plant is no longer in operation and Gippsland Water is not directly extracting water from Lake Glenmaggie. The offtake for the Maffra treatment plant downstream along the Macalister River and the Heyfield treatment plant downstream on the Thomson River remain.

Source water protection

SRW has developed Eastern and Western Storages Sustainability Plans that cover its drinking water storages. These plans include SRWs Safe Drinking Water Risk Management Plans for each storage in accordance with the requirements of the Act and the Regulations. Each risk management plan contains a detailed description of the system of supply, identification and assessments of the risks to the quality of the water, and a description of the steps currently taken and those that could be taken to manage those risks.

The risk management plans are regularly reviewed and updated. SRWs risk management plans were reviewed by an external auditor 2021/22 and outcomes are currently being incorporated into these plans as part of preparations for the audit against the *Act* in early 2023.

SRW, Greater Western Water and Gippsland Water maintain and adhere to a Memorandum of Understanding for the collection and sharing of water quality data, and other information pertinent to the protection of drinking water. The information sharing involves, among other things, the sharing of Safe Drinking Water Annual Reports and the results of water quality monitoring as requested by either party. Water quality monitoring undertaken by SRW, Greater Western Water and Gippsland Water in 2021/22 included:

- Gippsland Water & Greater Western Water undertaking routine monitoring of:
 - Physical/chemical parameters and metals within the storages; and
 - Sub-surface water samples for blue green algae (BGA) biovolume at their offtake
- SRW undertaking:
 - Visual inspections and surface water quality monitoring for BGA biovolume and species according to SRW's BGA Incident Management Plan; and
 - Ad hoc monitoring of physical/chemical parameters and metals in the event of an incident within the storage or in the water supply catchment.

In line with the 'catchment to tap' approach to water quality risk management, SRW recognises that actions within the greater catchment can have a direct impact on its storages. SRW works with local councils, Catchment Management Authorities (CMA's) and other agencies to influence and facilitate appropriate management to protect the quantity and quality of water captured in our storages.

Key Works

Examples of the works undertaken by SRW in 2021/22 to protect source waters include (but are not limited to);

- Engaged a consultant to undertake a review of SRWs approach to, structure, content and implementation of its risk management plans, which is guiding the approach to a subsequent internal review of the risk management plans.
- Ongoing support for and implementation of Domestic Wastewater Management Plan's in relevant municipalities (Moorabool, Macedon Ranges, Baw Baw and Wellington). In particular, SRW contributed to the review of the new Moorabool Shire Council Domestic Wastewater Management Plan.

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- SRWs role as a referral authority under the *Planning and Environment Act 1987*, including assessment of applications against the *Ministerial Guidelines for Planning Permits in Open Potable Water Supply Catchment Areas 2012*.
 - Ongoing works with the West Gippsland CMA and Gippsland Water on stormwater management from the Willow Grove township area to Blue Rock Lake.
 - Participation in workshops and the review of the Rosslynne Reservoir Land Development Study 2022 undertaken by Greater Western Water. The study investigated and predicted the potential impacts of proposed land development and consequential increases in illegal recreation on raw water quality in the Rosslynne Reservoir.
 - Receiving information from Water Research Australia projects that SRW provided investment into, investigating matters pertaining to BGA risk and management.
 - Continuing review of the Memorandums of Understanding between SRW and Gippsland Water and Greater Western Water. The review is to consider information sharing and a focus on incident management and communications.

Water Treatment processes

SRW does not treat the water prior to its receipt by Greater Western Water and Gippsland Water.

Issues

Not applicable.

Emergency / Incident Management

Incidents under Section 22 of the Act

During the 2021/22 monitoring period, there was one event reportable under Section 22 of the Act.

On 14 October 2021, Victoria Police notified SRW of a vehicle accident resulting in a Toyota Landcruiser rolling into Lake Glenmaggie and becoming submerged. As a Water Storage Manager under the Act, SRW notified Gippsland Water of the incident due to its potential to impact nearby Coongulla and Maffra Water Treatment Plants.

As the vehicle was completely submerged and there were no witnesses other than the driver (who was airlifted to Melbourne for hospitalization), the exact location of the vehicle was unknown.

Various meetings were coordinated between SRW, Gippsland Water and DH to assess the risk associated with drinking water quality. Visual inspections indicated no visible surface plumes on 14 October 2021. An assessment of drinking water contamination risk was undertaken on 15 October 2021. As a precautionary measure, the Coongulla WTP was turned off until 18 October 2021, which mitigated the risk for the Coongulla supply area. The factors that mitigated the risk for the Maffra supply area included:

- Existing offtake was submerged, avoiding any surface contamination
- Powdered Activated Carbon dosing at the Maffra Water Treatment Plant was increased by 50%
- Visual inspections of the Macalister River for visible surface impacts
- Samples taken on 15 October 2021 at Lake Glenmaggie and the Macalister River were tested for hydrocarbons. Results at all sites were less than detection or reporting levels.
- Significant dilution effect from Lake Glenmaggie to Maffra Offtake (~34km) and higher levels of discharge into the Macalister River due to significant rainfall and inflows at the time. Prior to the incident occurring, on 13 October 2021 releases from Lake Glenmaggie to the Macalister River were increased from 1,800ML/d to 4,400 ML/d in preparation for predicted high rainfall forecast over the coming days.

The vehicle was retrieved and salvaged by a dive team on 16 October 2021 with its fuel tank completely intact.

After these measures and assessments were undertaken, it was deemed that Gippsland Water was able to maintain supply of safe drinking water to its customers.

Other incidents

Blue-green Algae (BGA)

Under the Department of Environment, Land, Water and Planning's (DELWP) Algal Bloom Response Plan (2017) and Victorian Blue-Green Algae Circular (2018), SRW is obliged to notify agencies such as urban water suppliers, DH, the Environment Protection Authority (EPA) and DELWP of BGA blooms in storages and water bodies where SRW are defined as the Local Waterway Manager. In addition, DH must be notified under section 22 of the *Act* if contamination, such as a BGA bloom or a high turbidity event, occurs in a water body providing drinking water supply, where that event or bloom is likely to pose a health risk or cause widespread complaint.

SRW does not treat and supply drinking water to the public in Victoria. Therefore, SRW are not best placed to determine whether BGA levels pose a public health risk to drinking water supplies. Additionally, surface water sampling for BGA may return different results to the water quality sampling at depth taken by urban water suppliers. This means that the water supplier (as defined under the *Act*) may be the most appropriate entity to notify DH of BGA incidents under section 22.

SRW provides Gippsland Water, Greater Western Water, DELWP and DH with the results of its BGA monitoring program and communicates the presence of a bloom in its drinking water storages.

In accordance with DELWP's Algal Response Plan (2017) and Victorian Blue-Green Algae Circular (2018) there were two reportable blooms in drinking water storages over 2021/22 as follows;

- A low-level bloom in Lake Glenmaggie from February 2022 to May 2022.
- An ongoing low-level bloom in Pykes Creek Reservoir from December 2021 to June 2022.

In all instances, Gippsland Water and Greater Western Water were able to manage the BGA effectively through treatment processes.

Issues

There were no significant issues pertaining to raw water quality during 2020/21.

Risk Management Plan Audit Results

There was no audit undertaken during this reporting period. However, SRW has been considering the 2020/21 audit feedback in its review of its risk management plans as part of its ongoing review and improvement practices. One Opportunity for Improvement (OFI) was identified in the last audit, which related to the ability to clearly interpret SRWs response to identified hazards within its risk management plans (though the controls relating to hazards were deemed appropriate by the auditor). This OFI has informed work to improve the overall readability of its risk management plans.

Undertakings under section 30 of the Act

SRW did not have any undertakings under Section 30 of the *Act* with DH during the reporting period.

Further Information

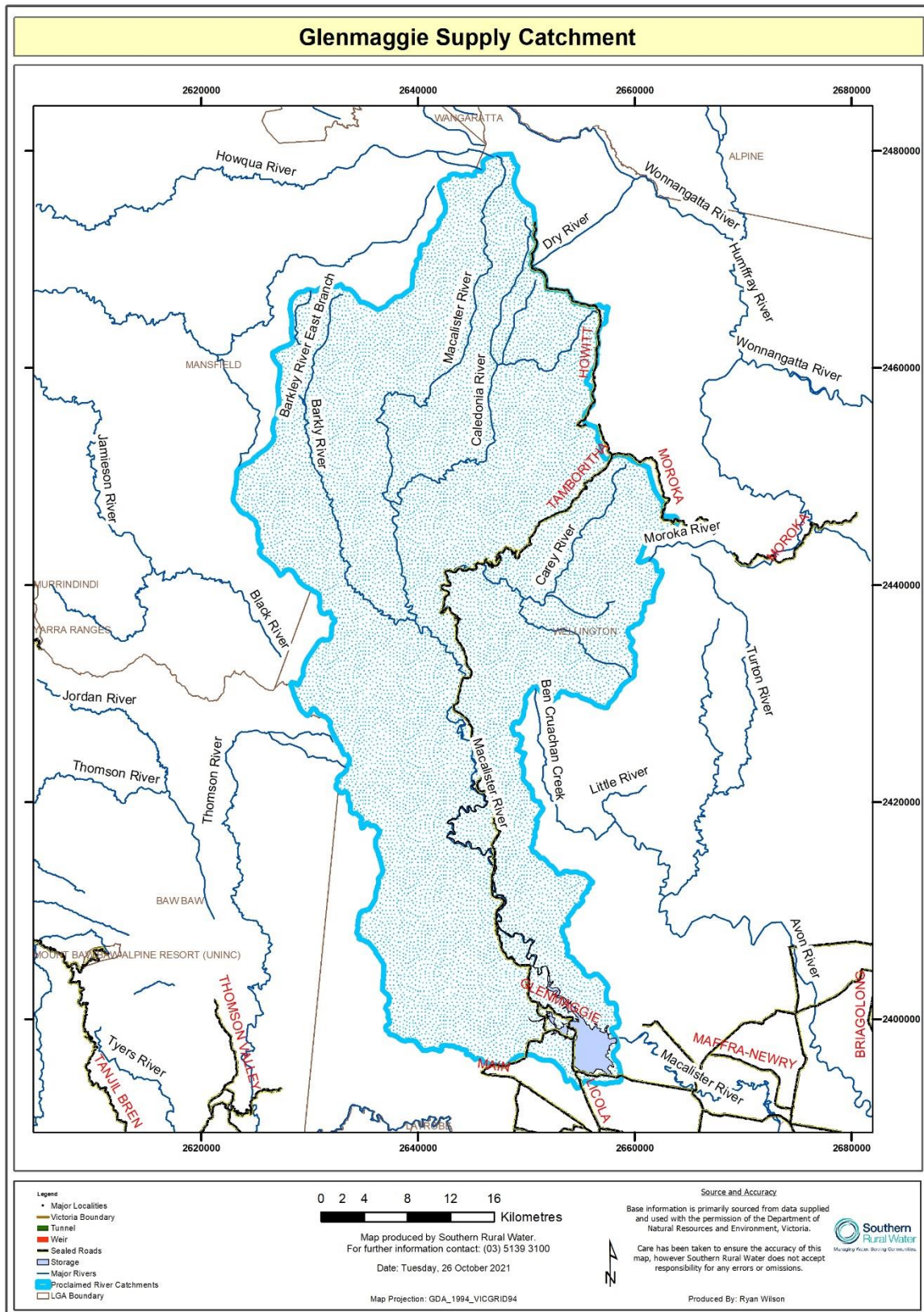
Further information regarding SRW's previous annual reports, responsibilities for BGA reporting, routine monitoring that is undertaken, current alerts and media releases, together with general information can all be found at SRW's website www.srw.com.au. This information is updated as required.

Members of the public can also access current bloom information by calling our dedicated BGA Information Line on 1300 781 806.

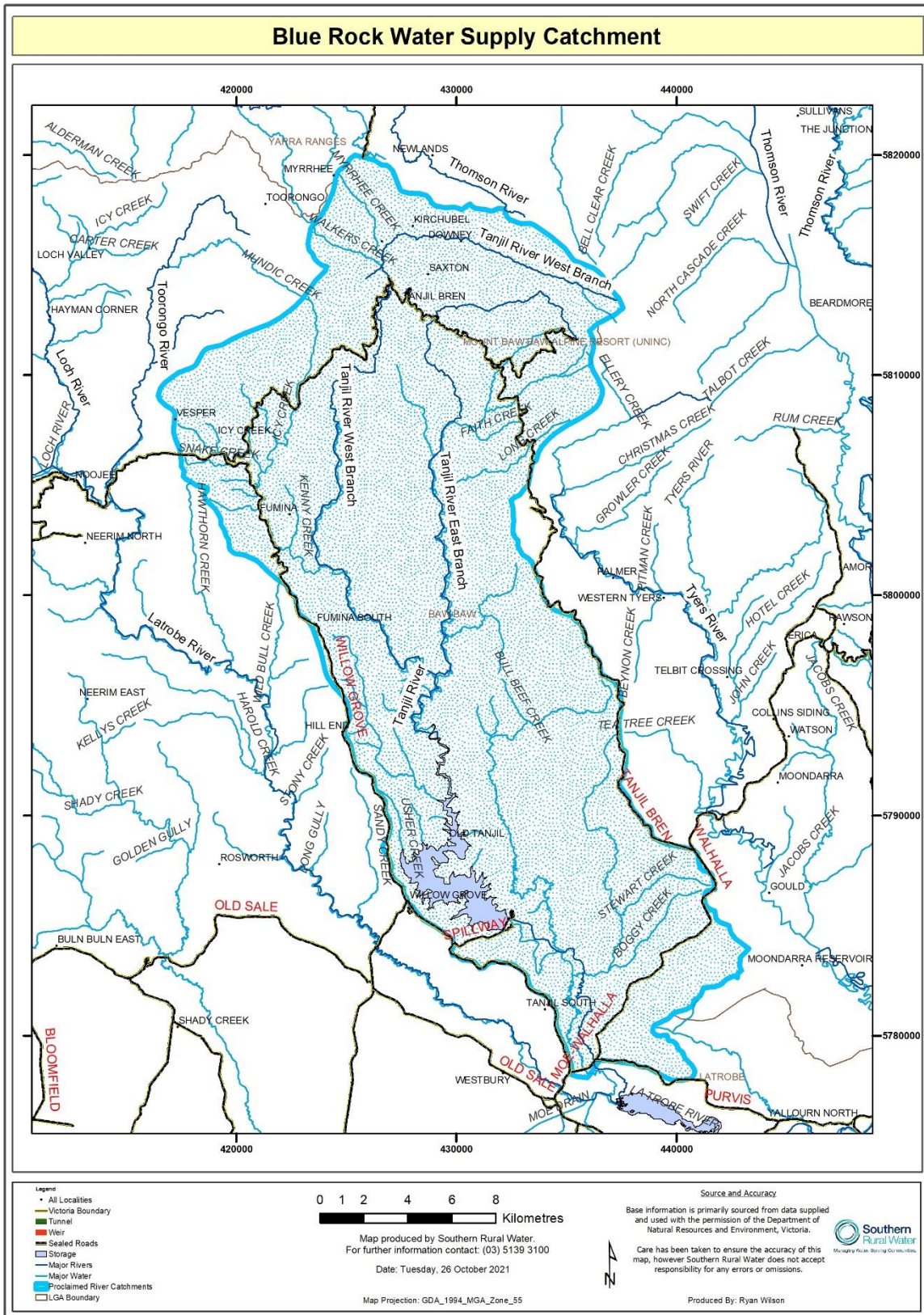
In addition, SRW can be contacted directly during business hours by email srw@srw.com.au or by telephone (03) 5139 3100.

Appendix

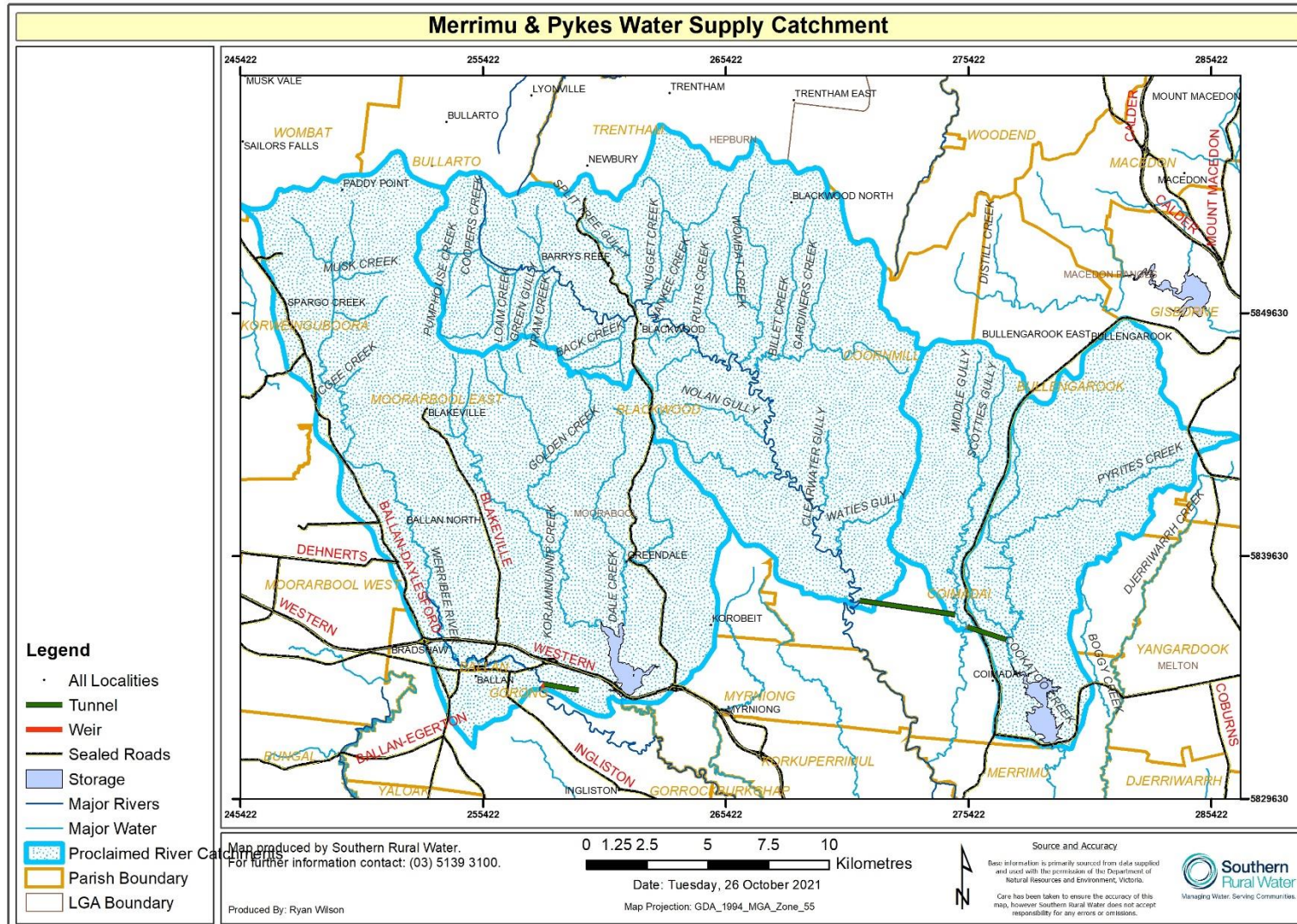
Lake Glenmaggie Proclaimed Catchment



Blue Rock Lake and Tanjil River Proclaimed Catchment



Merrimu Reservoir, Pykes Creek Reservoir and Proclaimed Catchments



Roslynne Reservoir Proclaimed Catchment

